

# Trash Baseline Loading & Reduction Tracking Methods

## *The San Francisco Bay Area Experience*

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Adapted

Presentation to Trash Policy PAG

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# Presentation Outline

- 1. Overview of Regulatory Requirements**
- 2. Trash Generation Rate Development**
- 3. Trash Load Reduction Tracking Method**





# Municipal Regional Stormwater Permit

- **76 Permittees (Cities, Counties and Flood Control Districts)**
- **Significant Trash Reduction Requirements:**
  - **Planning**
    - Baseline Trash Load from MS4s
    - Method to track trash load reductions
  - **Implementation**
    - Attain a 40% trash load reduction by July 1, 2014
    - Install and maintain full capture devices to treat area equivalent to 30% of retail/wholesale land use
    - Annually cleanup and assess creek/shoreline trash hot spots
  - **Assessment**
    - Tracking of loads reduced via established methodology

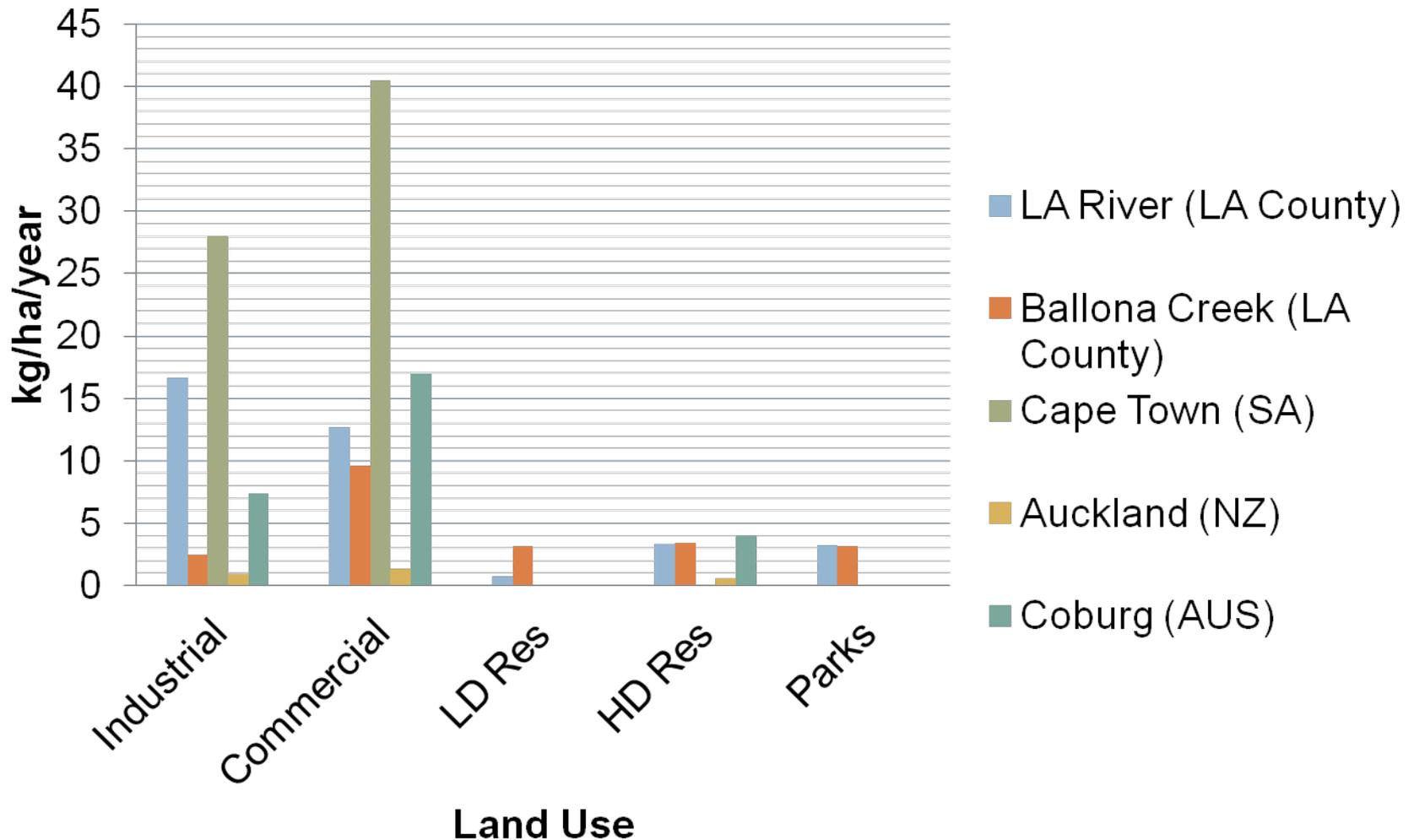
# Definition of “Trash”

- All improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, or plastic thrown or deposited on the lands and waters of the state.
- Excludes leaves, sediment and other natural debris

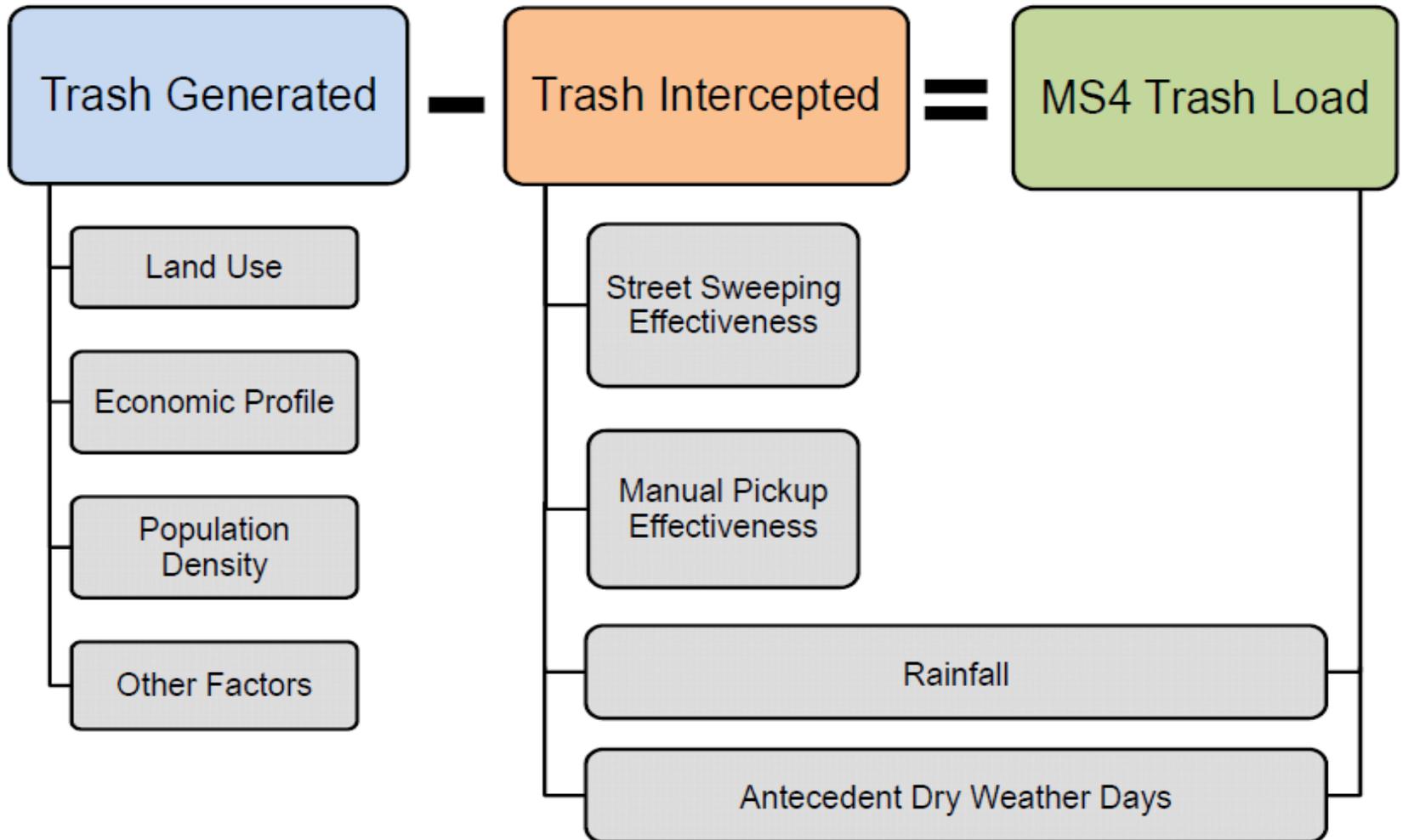


# Trash Baseline Loads

# Documented Trash Loading Rates



# MS4 Trash Loading Conceptual Model



# Regional Trash Baseline Generation Rate Study

- Goal – Develop trash generation rates that can be used by all Bay Area Permittees to develop Permittee-specific baseline trash loads.
- 150-160 Monitoring Sites
- 2-3 Wet Season and 1 Dry Season Sampling Event
  - 1 wet and 1 dry completed
- Debris Characterization
  - Volume and Weight
  - Item Counts
    - Plastic Grocery Bags
    - Polystyrene Products
    - CRV Bottles



# Monitoring Site Distribution Goals

Land Use Category	Median Annual Household Income			Total
	Low (<\$50,000)	Moderate (\$50,000 to \$100,000)	High (>\$100,000)	
High Density Residential	6%	6%	6%	<b>18%</b>
Low Density Residential	4%	4%	4%	<b>12%</b>
Commercial and Public Services	3%	3%	3%	<b>9%</b>
Retail and Wholesale	13%	13%	13%	<b>39%</b>
Light and Other Industrial	7%			<b>7%</b>
Heavy Industrial	7%			<b>7%</b>
Urban Parks	4%			<b>4%</b>
Primary Schools	4%			<b>4%</b>





# **Trash Load Reduction Tracking Method**

# Trash Load Reduction Tracking Method

- **How to track MS4 load reductions applicable to each enhanced and new trash control measures?**
  
- **BASMAA Regional Project**
  - ▣ Tracking = Accounting System
  
- **Two Types of Tracking Methods:**
  - ▣ Load Reduction Quantification Formulas
  - ▣ Load Reduction Credits
  
- **Stakeholder Process**
  - ▣ BASMAA Trash Committee
  - ▣ Participation by City/County, NGO, Regulatory staff

# Quantification or Credit?

- Preference is to quantify
- Quantification constrained by available data and practicality
- Magnitude of credit largely based demonstrated success and best professional judgment
- Quantifications and credits can provide incentives for implementation



# Selected Control Measures

<b>Quantifications</b>	<b>Credits</b>
<ul style="list-style-type: none"><li>• On-land Trash Cleanups (Volunteer and Municipal)</li><li>• Enhanced Street Sweeping</li><li>• Partial-Capture Treatment Devices</li><li>• Full-Capture Treatment Devices</li><li>• Enhanced Stormwater Conveyance System Maintenance</li><li>• Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal)</li></ul>	<ul style="list-style-type: none"><li>• Polystyrene Foam Food Service Ware Ban</li><li>• Single-use Carryout Bag Ordinance</li><li>• Public Education and Outreach Programs</li><li>• Trash Reduction from Vehicles with Unsecured Loads</li><li>• Enhanced anti-littering and illegal dumping enforcement activities</li><li>• Improved Trash Bin/Container Management (Municipally or Privately-Controlled)</li></ul>

# Project Schedules

- **Trash Generation Rate Development**
  - Initial Rates - February 1, 2012 (Initial Report)
  - Revised Rates – September 15, 2012 (Final Report)
  
- **Load Reduction Tracking Method**
  - Initial Draft Technical Report – Comments Received
  - Revised Draft Report – October 2011
  - Final Report – November 2011

# Questions...

